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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,908	11/21/2003	Toshio Mizue	50212-553	7355

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Washington, DC 20005-3096

EXAMINER

KIM, ELLEN E

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/717,908

Applicant(s)

MIZUE, TOSHIO

Examiner

Ellen Kim

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*(Signature)*

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 7-12 are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This is responsive to Applicant's amendment filed on 9/29/05.

Claims 1-6 are examined for examination purpose.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minamino et al [USPAT 6,619,859].**

Minamino discloses an optical module comprising:

An optical subassembly 10 including an optical device;

A housing including a base 13 and a cover 12 [fig. 11A], the base 13 having a bottom surface thereof, and the optical subassembly being provided between the base 13 and the cover 12;

A support 5 being in contact with the optical subassembly 10, the support 5 being disposed on the bottom surface of the base 13; and

A thermal sheet 6 provided between the cover 12 and the support 5,

Wherein the support 5 reduces a stress applied to the optical subassembly 10 from the thermal sheet 6 and provides a thermal path from the optical subassembly 10.

Minamino disclose every aspect of claimed invention except for the semiconductor material.

Official Notice is taken that utilizing semiconductor material for optical module in the optical communication system for the purpose of high speed of the optical communication is old and well known in the art. See In Re Malcolm 1942 C.D. 589:543 O.G. 440 MPEP 706.02 (a).

Therefore, it would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Minamino's device to include semiconductor optical module for the purpose of high speed of the system.

In re claim 2, the support 5 includes a first leg portion, a second leg portion, and a bridge, wherein the cover 12 and the bridge sandwiches the thermal sheet therebetween, and the optical subassembly 10 is provided between the first and the second leg portions.

In re claim 3, Minamino disclose every aspect of claimed invention except for the solders between the optical subassembly and the first and second leg portions.

It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Minamino's device to include the solders between the

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optical subassembly and the first and second leg portions for the purpose of stable alignment and high coupling efficiency of the device.

In re claim 4, the optical subassembly 10 includes an outer surface and a stem, and the support 5 having finger 5d [fig. 4] curved [inherently formed by having a groove 5f] so as to be in contact with the outer surface of the stem.

In re claim 5, the outer surface of the 10b is spaced from the bridge [the edge whereon the leg portions 5cs are disposed, see fig. 5, near 5j].

In re claim 6, Minamino disclose every aspect of claimed invention except for the solders between the stem and the finger.

It would have been obvious to the ordinary skilled person in the art at the time the invention was made to modify Minamino's device to include the solders between the stem and the finger for the purpose of stable alignment and high coupling efficiency of the device.

### ***Response to Arguments***

Applicant's arguments filed 9/29/05 have been fully considered but they are not persuasive.

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Applicant argues that No factual evidence has been provided to support Examiner's motivation to modify Minamino et al device to include the semiconductor optical module.

Examiner notes that Minamino et al device show an optical device, such as LD or PD [column 4, lines 66-67]. Minamino et al, however, fail to show that the optical device [LD or PD] being made of semiconductor material. As discussed above, and in previous Office action, the semiconductor optical devices, such as LD or PD are extremely well known in the art at the time the invention was made.

To provide the factual evident of semiconductor optical LD or PD, the following references are provided. Note that those references are only provided for showing the general teaching of utilizing semiconductor optical LD or PD, and for providing factual evidence as responding to Applicant argument.

U.S. Patent No. 5,040,039 to Hattori et al.

U.S. Patent No. 5,061,977 to Funaba.

U.S. Patent No. 5,281,829 to Chinen.

Applicant further argues that the receptacle 5 of the Fig. 11A of Minamino et al is quite different from the support element of the claimed invention. If a force is applied to the top or bottom of the receptacle, then receptacle 5 would easily deform causing optical misalignment between the optical module 10 and the connector in receptacle.

Examiner acknowledges that the receptacle 5 is different from the support of Applicant's invention. Note that for the examination purpose, the receptacle 5 of

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Minamino et al reference clearly shows what Applicant claimed in claims. Applicant fails to establish the clear definition of the support 5 in the claim.

Applicant's newly added limitation such as "reducing a stress" is clearly shown in Minamino et al device by supporting the thermal sheet 6 and the cover 12.

Applicant further argues that the combination of receptacle 5 and cover 6 cannot provide an assembly with the strength necessary to resist deformation.

Note that Examiner only considers what has been claimed in the claims for examination purpose.

Applicant further argues that the support element of independent claim 1 of the present application is in contact with the subassembly.

Examiner notes that from fig. 2, 3A, 3B, and 5, it is clear that the receptacle 5 or 1 is in contact with the subassembly 10.

Applicant further argues that the receptacle 5 of Minamino et al do not have a leg and a bridge as required by claim 2.

As discussed above, and in previous Office action, Examiner clearly sees the receptacle 5 of Minamino et al show what has been claimed in claim 2. Applicant is requested to discuss how the receptacle 5 of Minamino et al does not show what has been claimed in claim 2.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should



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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

For all official patent application related correspondence for organizations reporting to the Commissioner of Patents:

- Correspondence that is transmitted by facsimile must be directed to the central facsimile number, (703) 872-9306.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen Kim whose telephone number is (571) 272-2349. The examiner can normally be reached on Monday through Thursday.

Ellen E. Kim  
Primary Examiner  
December 9, 2005/EK

A handwritten signature in black ink, appearing to read "Ellen Kim", is positioned to the right of the typed name and title.